# INDEX

A-E

Africanized honey bees, spread of, Mar-4
Agricultural dust, errors in sampling of, May-10
Agroforestry, benefits of, Dec-18
Air quality of agricultural operations
monitoring with LiDAR, Oct-20
samplers overestimate dust levels, May-10
American Indian tribes, ARS's work with, Nov-20
Animal health

device measures core temperature, Nov-23 transmissible spongiform encephalopathies, Dec-2, 4

Animal welfare, reducing aggressive pecking in hens, Jul-23

Aquaculture, rearing of sunshine bass, Jun-14 Asian longhorned beetles, detection of, Feb-12 Bacillus thuringiensis, as nematode control, Aug-16 Barley, breeding for resistance to Russian wheat aphid. Apr-16

Beauveria bassiana

as biocontrol for coffee berry borer, Nov-10 as biocontrol of grasshoppers, crickets, Oct-10 Beef, gene for leanness, tenderness of, Jul-10 Regkeeping

breeding SMR trait for *Varroa* resistance, May-14 managing hives near Africanized bees, Mar-4

grooming helps resist tracheal mites, Dec-21

Metarhizium fungus kills Varroa mites, Oct-18

Biocontrol

bacterial toxins kill five crop pests, Jun-23 managing disease in beneficial insects for, Apr-22 of coffee berry borer, Nov-10

of giant salvinia with weevil, Sep-10 of grasshoppers and Mormon crickets, Oct-10

of imported fire ants, Dec-12 of leafrollers in orchards, Jan-12

of melaleuca, Nov-4

of Old World climbing fern, Jul-12 of silverleaf whitefly, Mar-23

of soybean cyst nematodes, Mar-13

of yellow starthistle with rust fungus, Aug-20 Biofurnigants, mustard plants as, Oct-14 Black vine weevil, audio detection of, Apr-8 Camplyobacter

bacteriocins reduce, Nov-23 genetic makeup of, Oct-2,4

RNA assays detect active genes in, Oct-6 staining with triphenyltetrazolium chloride, Oct-7 Carrots, pigmented, health benefits of, Nov-12 Catfish

dogs trained to smell off-flavor in, Apr-10 limiting poaching of by water turkeys, Jan-23 Cattle

bovine spongiform encephalopathy, Dec-2, 4 digestion/productivity with pasture mixes, Mar-10 genes for mastitis resistance in, Sep-4 grass-fed, year-round production of, Feb-14 grazing's effect on field nitrate levels, Jun-21 oral vaccine for *E. coli* infection in, Aug-14 Cereal crops, sequencing genomes of, Oct-13 Cherries, anti-inflammatory effects of, May-18 Chickens

intestinal expressed genomic library, Dec-20 pilot processing plant for studies of, Feb-22 Safe,O poultry wash reduces bacteria on, Oct-7 Salmonella weakens eggshells of, Oct-19 selecting for less aggression in hens, Jul-23 Chronic wasting disease of deer, elk, Dec-2, 4 Cinnamon, effect of on sugar metabolism, Apr-19 Citrus leprosis virus, identifying mite vectors, Mar-18 Climate change, effect of on erosion, crops, Jul-8 Coffee berry borer, biocontrol of, Nov-10 Coffee gipen scale, control of, Sep-18 Coffee, genetic differences for species of, Jun-18 Colorado potato beetle biocontrol of, Iun-23

biocontrol of, Jun-23 new freeze-dried diet for, Mar-17 ComBase, predictive microbiology database, Feb-18 Computer models, costs of ethanol production, Jul-16 Conservation Effects Assessment Program, May-2 Corn rootworm, biocontrol of, Jun-23 Corn

Bt, risk to monarch butterfly, Sep-4 endophyte in fights harmful fungi, Dec-15 improving ethanol production from, Jul-16 modified grain sorter spots mycotoxins in, Jun-23

Bit, monitoring insect resistance to, Sep-4 desert shrub gene inserted into, Nov-9 device replaces broken bale ties, Nov-23 DNA-based identification system for, Jul-23 sampling system tells fiber properties of, Oct-8 solid-wound brush reduces gin noise, Apr-23

Cotton-clay nanocomposite is heat tolerant and

flame retardant, Apr-9 Cows, see Cattle

Delta Nutrition Intervention Research Initiative, Jun-4
Desertification, studies on preventing, Jul-4
Diamondback moth, biocontrol of, Jun-23
E. coli, calves gall bladder contain, Aug-14
ECOTONE computer model predicts landscape

changes, Jul-4 Eggplant

germplasm collection of, Jan-16 measuring phenolic acid content of, Jan-16 Eggs, quality and functionality of in storage, Jun-17 Electromagnetic induction

for measuring soil nutrients, Sep-14 for measuring soil salinity, Sep-16

Erosion

streambank, methods to control, May-2, 4 tracking rock movement with transponders and GPS, May-23

Escherichia coli, preventing infection in pigs, Mar-9
Ethanol

computer models for production costs of, Jul-16 use of byproducts from production of, Oct-23 Exotic Newcastle disease, vaccine for, Apr-23

#### E.I

Fertigation, advances in use of, Nov-18 Fertilizer, optimal application of phosphorus, Jul-23 Floral crops

preserving germplasm of, Aug-12 protecting from invasive fungi, Mar-14 salt-tolerance of, Aug-4

Food packaging, edible adhesives for, Aug-23 Food safety

bacteriocins reduce bacteria numbers, Nov-23 BSE surveillance program and, Dec-2, 4 Campylobacter and, Oct-2, 4, 7 new database for monitoring levels of, Feb-18 oral vaccine to fight *E. coli* in cattle, Aug-14 prebiotics boost good gut bacteria, Aug-23 Safe<sub>2</sub>O poultry wash reduces bacteria, Oct-7 vitamin E fights bacteria in turkey gut, Jan-11

21st-Century Sugar Beet Breeding, Apr-2 An Exciting New Initiative To Make Watersheds Healthy, May-2 ARS Battles Mad Cow, Scrapie, and Other TSEs, Dec-2

Bee Benefits to Agriculture, Mar-2 Cycles of Learning: ARS and Tomorrow's Scientists, Aug-2

How Safe Are Genetically Engineered Crops? Sep-2

Integrated Pest Management Programs Strive To Solve Agricultural Problems, Nov-2 Local Research, But Everyone's Watching, Feb-2 Monitoring Rangeland Health for an

Experiment in Public Land Ownership, Jul-2 Premier Papaya Plantations Rescued Through Science and Teamwork, Jan-2 Quelling Campylobacter: It Takes a Planet, Oct-2 When Too Much of a Good Thing Is Bad, Jun-2

Fungi biofurnigating with mustard plants, Oct-14 grain sorter detects mycotoxins of, Jun-23 identification of at U.S. ports, Mar-14 mycorrhizal, effect of fertilizers on, May-7 new pinto bean resists, Apr-23 on flowers and trees, Mar-14

PCR test identifies rusts in wheat, Jun-13 Fungicide, from peppers, fights fruit molds, Mar-23 Fusarium sporotrichioides, genes added to, Oct-23 Gardenias, research leads to lift of ban on, Sep-18 Genebank

of flowering plants, Aug-12 of lychee and longan, May-20 of macadamia nuts at Hilo, Jun-18 Genetic engineering

and new allergens, Sep-4 desert shrub gene inserted into cotton, Nov-9 of potato for late blight resistance, Aug-11 of rice for resistance to blast fungus, Aug-18 timeline of, Sep-6

Genetics

altered Fusarium produces carotenoids, Oct-23 papaya studies using, Jan-2, 4 reverse transcription for swine flu vaccine, Feb-20 Genome

mapping of sugar beet, Apr-2, 4 sequencing of in cereal crops, Oct-13 Genomics, use of to counter poultry diseases, Dec-20 Geographic information system, use in cotton sampling, Oct-8

Giant salvinia, weevil as biocontrol for, Sep-10 Global Positioning System, use in cotton sampling, Oct-8

Goat's milk, test for *Brucella melitensis* in Oct-23 Grass seed, economical production of, Feb-10 Grass, garbage pulp helps revegetate lands, Jul-15 Grasses, native species, revegetating with, May-17 Grass-fed beef and year-round grazing, Feb-14 Grasshoppers

migratory behavior of, Oct-12 research on outbreaks of, Oct-10 Grazing, Directional Virtual Fencing (DVF) to control, Jul-4

Green stinkbug, biocontrol of, Jun-23 Groundwater, nitrate movement in soil to, Jun-23 Hawaii Area Wide Fruit Fly Integrated Pest Management (HAW-FLYPM) program, Feb-2, 4, 9

Hessian fly, developing wheat resistant to, Apr-23 Honey bees, benefits of and threats to, Mar-2 Horticulture

device detects black vine weevils in pots, Apr-8 protecting industry from invasive fungi, Mar-14 Human nutrition

abdominal obesity and metabolic syndrome, Jun-8 adding whey proteins to snacks, Jun-23 antioxidants in Bing cherries help arthritis, May-18 Automated Multiple Pass Method, Jun-10 choline database online, Oct-23 cinnamon compounds, insulin effect of, Apr-19 cobalamin measurement in diet, Feb-23 computer game inspires kids to eat better, Aug-10 diet- and obesity-related illness, Jun-2, 4, 8 dietary habits in Lower Mississippi Delta, Jun-4 diet vs. cholesterol, immunity, Mar-23 folate levels related to depression, Apr-15 health benefits of pigmented carrots, Nov-12 lycopene, other carotenoids, Oct-23, Dec-10 magnesium and energy, heart health, May-8 measuring iron uptake from milk, Jul-22 methods for dietary research, Jun-8, 10 Mobile Nutrition Research Laboratory, Jul-18 National Fluoride Database, Nov-22 nutrition research on American Indians, Jul-18 oats benefit artery health, Jun-7

# INDEX

A-E

Africanized honey bees, spread of, Mar-4
Agricultural dust, errors in sampling of, May-10
Agroforestry, benefits of, Dec-18
Air quality of agricultural operations
monitoring with LiDAR, Oct-20
samplers overestimate dust levels, May-10
American Indian tribes, ARS's work with, Nov-20
Animal health

device measures core temperature, Nov-23 transmissible spongiform encephalopathies, Dec-2, 4

Animal welfare, reducing aggressive pecking in hens, Jul-23

Aquaculture, rearing of sunshine bass, Jun-14 Asian longhorned beetles, detection of, Feb-12 Bacillus thuringiensis, as nematode control, Aug-16 Barley, breeding for resistance to Russian wheat aphid. Apr-16

Beauveria bassiana

as biocontrol for coffee berry borer, Nov-10 as biocontrol of grasshoppers, crickets, Oct-10 Beef, gene for leanness, tenderness of, Jul-10 Regkeeping

breeding SMR trait for *Varroa* resistance, May-14 managing hives near Africanized bees, Mar-4

grooming helps resist tracheal mites, Dec-21

Metarhizium fungus kills Varroa mites, Oct-18

Biocontrol

bacterial toxins kill five crop pests, Jun-23 managing disease in beneficial insects for, Apr-22 of coffee berry borer, Nov-10

of giant salvinia with weevil, Sep-10 of grasshoppers and Mormon crickets, Oct-10

of imported fire ants, Dec-12 of leafrollers in orchards, Jan-12

of melaleuca, Nov-4

of Old World climbing fern, Jul-12 of silverleaf whitefly, Mar-23

of soybean cyst nematodes, Mar-13

of yellow starthistle with rust fungus, Aug-20 Biofurnigants, mustard plants as, Oct-14 Black vine weevil, audio detection of, Apr-8 Camplyobacter

bacteriocins reduce, Nov-23 genetic makeup of, Oct-2,4

RNA assays detect active genes in, Oct-6 staining with triphenyltetrazolium chloride, Oct-7 Carrots, pigmented, health benefits of, Nov-12 Catfish

dogs trained to smell off-flavor in, Apr-10 limiting poaching of by water turkeys, Jan-23 Cattle

bovine spongiform encephalopathy, Dec-2, 4 digestion/productivity with pasture mixes, Mar-10 genes for mastitis resistance in, Sep-4 grass-fed, year-round production of, Feb-14 grazing's effect on field nitrate levels, Jun-21 oral vaccine for *E. coli* infection in, Aug-14 Cereal crops, sequencing genomes of, Oct-13 Cherries, anti-inflammatory effects of, May-18 Chickens

intestinal expressed genomic library, Dec-20 pilot processing plant for studies of, Feb-22 Safe,O poultry wash reduces bacteria on, Oct-7 Salmonella weakens eggshells of, Oct-19 selecting for less aggression in hens, Jul-23 Chronic wasting disease of deer, elk, Dec-2, 4 Cinnamon, effect of on sugar metabolism, Apr-19 Citrus leprosis virus, identifying mite vectors, Mar-18 Climate change, effect of on erosion, crops, Jul-8 Coffee berry borer, biocontrol of, Nov-10 Coffee gipen scale, control of, Sep-18 Coffee, genetic differences for species of, Jun-18 Colorado potato beetle biocontrol of, Iun-23

biocontrol of, Jun-23 new freeze-dried diet for, Mar-17 ComBase, predictive microbiology database, Feb-18 Computer models, costs of ethanol production, Jul-16 Conservation Effects Assessment Program, May-2 Corn rootworm, biocontrol of, Jun-23 Corn

Bt, risk to monarch butterfly, Sep-4 endophyte in fights harmful fungi, Dec-15 improving ethanol production from, Jul-16 modified grain sorter spots mycotoxins in, Jun-23

Bit, monitoring insect resistance to, Sep-4 desert shrub gene inserted into, Nov-9 device replaces broken bale ties, Nov-23 DNA-based identification system for, Jul-23 sampling system tells fiber properties of, Oct-8 solid-wound brush reduces gin noise, Apr-23

Cotton-clay nanocomposite is heat tolerant and

flame retardant, Apr-9 Cows, see Cattle

Delta Nutrition Intervention Research Initiative, Jun-4
Desertification, studies on preventing, Jul-4
Diamondback moth, biocontrol of, Jun-23
E. coli, calves gall bladder contain, Aug-14
ECOTONE computer model predicts landscape

changes, Jul-4 Eggplant

germplasm collection of, Jan-16 measuring phenolic acid content of, Jan-16 Eggs, quality and functionality of in storage, Jun-17 Electromagnetic induction

for measuring soil nutrients, Sep-14 for measuring soil salinity, Sep-16

Erosion

streambank, methods to control, May-2, 4 tracking rock movement with transponders and GPS, May-23

Escherichia coli, preventing infection in pigs, Mar-9
Ethanol

computer models for production costs of, Jul-16 use of byproducts from production of, Oct-23 Exotic Newcastle disease, vaccine for, Apr-23

#### E.I

Fertigation, advances in use of, Nov-18 Fertilizer, optimal application of phosphorus, Jul-23 Floral crops

preserving germplasm of, Aug-12 protecting from invasive fungi, Mar-14 salt-tolerance of, Aug-4

Food packaging, edible adhesives for, Aug-23 Food safety

bacteriocins reduce bacteria numbers, Nov-23 BSE surveillance program and, Dec-2, 4 Campylobacter and, Oct-2, 4, 7 new database for monitoring levels of, Feb-18 oral vaccine to fight *E. coli* in cattle, Aug-14 prebiotics boost good gut bacteria, Aug-23 Safe<sub>2</sub>O poultry wash reduces bacteria, Oct-7 vitamin E fights bacteria in turkey gut, Jan-11

21st-Century Sugar Beet Breeding, Apr-2 An Exciting New Initiative To Make Watersheds Healthy, May-2 ARS Battles Mad Cow, Scrapie, and Other TSEs, Dec-2

Bee Benefits to Agriculture, Mar-2 Cycles of Learning: ARS and Tomorrow's Scientists, Aug-2

How Safe Are Genetically Engineered Crops? Sep-2

Integrated Pest Management Programs Strive To Solve Agricultural Problems, Nov-2 Local Research, But Everyone's Watching, Feb-2 Monitoring Rangeland Health for an

Experiment in Public Land Ownership, Jul-2 Premier Papaya Plantations Rescued Through Science and Teamwork, Jan-2 Quelling Campylobacter: It Takes a Planet, Oct-2 When Too Much of a Good Thing Is Bad, Jun-2

Fungi biofurnigating with mustard plants, Oct-14 grain sorter detects mycotoxins of, Jun-23 identification of at U.S. ports, Mar-14 mycorrhizal, effect of fertilizers on, May-7 new pinto bean resists, Apr-23 on flowers and trees, Mar-14

PCR test identifies rusts in wheat, Jun-13 Fungicide, from peppers, fights fruit molds, Mar-23 Fusarium sporotrichioides, genes added to, Oct-23 Gardenias, research leads to lift of ban on, Sep-18 Genebank

of flowering plants, Aug-12 of lychee and longan, May-20 of macadamia nuts at Hilo, Jun-18 Genetic engineering

and new allergens, Sep-4 desert shrub gene inserted into cotton, Nov-9 of potato for late blight resistance, Aug-11 of rice for resistance to blast fungus, Aug-18 timeline of, Sep-6

Genetics

altered Fusarium produces carotenoids, Oct-23 papaya studies using, Jan-2, 4 reverse transcription for swine flu vaccine, Feb-20 Genome

mapping of sugar beet, Apr-2, 4 sequencing of in cereal crops, Oct-13 Genomics, use of to counter poultry diseases, Dec-20 Geographic information system, use in cotton sampling, Oct-8

Giant salvinia, weevil as biocontrol for, Sep-10 Global Positioning System, use in cotton sampling, Oct-8

Goat's milk, test for *Brucella melitensis* in Oct-23 Grass seed, economical production of, Feb-10 Grass, garbage pulp helps revegetate lands, Jul-15 Grasses, native species, revegetating with, May-17 Grass-fed beef and year-round grazing, Feb-14 Grasshoppers

migratory behavior of, Oct-12 research on outbreaks of, Oct-10 Grazing, Directional Virtual Fencing (DVF) to control, Jul-4

Green stinkbug, biocontrol of, Jun-23 Groundwater, nitrate movement in soil to, Jun-23 Hawaii Area Wide Fruit Fly Integrated Pest Management (HAW-FLYPM) program, Feb-2, 4, 9

Hessian fly, developing wheat resistant to, Apr-23 Honey bees, benefits of and threats to, Mar-2 Horticulture

device detects black vine weevils in pots, Apr-8 protecting industry from invasive fungi, Mar-14 Human nutrition

abdominal obesity and metabolic syndrome, Jun-8 adding whey proteins to snacks, Jun-23 antioxidants in Bing cherries help arthritis, May-18 Automated Multiple Pass Method, Jun-10 choline database online, Oct-23 cinnamon compounds, insulin effect of, Apr-19 cobalamin measurement in diet, Feb-23 computer game inspires kids to eat better, Aug-10 diet- and obesity-related illness, Jun-2, 4, 8 dietary habits in Lower Mississippi Delta, Jun-4 diet vs. cholesterol, immunity, Mar-23 folate levels related to depression, Apr-15 health benefits of pigmented carrots, Nov-12 lycopene, other carotenoids, Oct-23, Dec-10 magnesium and energy, heart health, May-8 measuring iron uptake from milk, Jul-22 methods for dietary research, Jun-8, 10 Mobile Nutrition Research Laboratory, Jul-18 National Fluoride Database, Nov-22 nutrition research on American Indians, Jul-18 oats benefit artery health, Jun-7

obesity, high U.S. rate of, Jun-2, 8 rheumatoid arthritis and calorie needs, Jul-22 soy infant formula, long-term effects of, Jan-8 soy isoflavone supplements for bone loss, Apr-21 trans fatty acids linked to LDL cholesterol, May-23 vitamin D and muscle strength, Oct-19 whole-grain fiber benefits, Dec-16 Imported fire ants, baits, repellents for, Dec-12 Insects, beneficial, microsporidia in, Apr-22

Insects, beneficial, microsporidia in, Apr-22 Integrated pest management fruit fly control with, Feb-2, 4 imported fire ants control with, Dec-12 nine ARS programs in, Nov-2

Irrigation sprinkler, for plant selenium absorption, Sep-23 with recycled drainage waters, Sep-16 Jornada Experimental Range, studies on health of desert rangeland, Jul-2, 4 LiDAR, testing agricultural air guality with Oct-20

LiDAR, testing agricultural air quality with, Oct-20 Listeria monocytogenes, in turkey, Jan-11 Little Topashaw Creek, erosion research at, May-4 Longan, help for Hawaiian growers of, May-20 Lychee, help for Hawaiian growers of, May-20

### M-R

Macadamia nuts, genetic studies of, Jun-18 Mad cow disease, Dec-2, 4 Malaysian fruit fly, control of, Feb-2, 4 Manure, phosphorus in binds to water-treatment residue, Jul-21 Mediterranean fruit fly, control of, Feb-2, 4 Melaleuca, areawide IPM program, Nov-4

Medaleuca, areawide IPM program, Nov-4 Melan Hy, control of, Feb-2, 4 Metarhizium anisopliae

as biocontrol of *Orthoptera*, Oct-10 kills *Varroa* mites, Oct-18

Micropropagation of sweetgum trees, Dec-17 Milk production, forage plants' effect on, Mar-10 Mormon crickets, migratory behavior of, Oct-12 Moths, unisex lure for loopers and other, Nov-14 Mustard cover crops as biofumigants, Oct-14 Mycologists, role of to port inspectors, Mar-14 Myostatin gene affects lean/fat ratio in beef, Jul-10 National Clonal Germplasm Repository for Fruit and Nut Crops, Jan-7, Apr-12, Nov-17 National Small Grains Collection, Apr-16

Nematodes as biocontrol for coffee berry borer, Nov-10 biofumigating with mustard plants, Oct-14 methods to disrupt development of, Aug-16 soybean cyst, biocontrol of, Mar-13

Nursery crops, effect of mycorrhizal fungi on, May-7 Oats, avenanthramides in suppress blood cell adhesion to arteries, Jun-7

Office of International Research Programs, work with Mexico, Jan-21

Old World climbing fern, biocontrols for, Jul-12 Orange juice, smell and taste tests for aroma compounds in, Sep-20

Oranges, pectin in peel aids gut bacteria, Mar-23 Oriental fruit fly, control of, Feb-2, 4 Ornamental Plant Germplasm Center, Aug-12

Ornamental Plant Germplasm Center, Aug Papaya

genetic studies, new varieties of, Jan-2, 4 sex chromosomes and fruit size, quality, Sep-23 Pasture-based dairy systems, Mar-10 Peach, new peento variety named "Galaxy," Apr-12 Peas, *Rhizobium* mycorrhizal inoculant fixes nitrogen, raises yields of, Feb-19

Pecans, foliar-applied nickel prevents mouse-ear in, Feb-23

Phosphorus, optimal application of to soil, Jul-23 Phytoremediation, alpine pennycress removes zinc, cadmium from soil, Sep-22 Pigs

beneficial-bacteria mix fights *E. coli* in, Mar-9 DXA to measure carcass composition of, Jan-19

reducing Salmonella, preslaughter, Feb-16 swine influenza vaccine, Feb-20

tracking Salmonella with biophotonics, May-23 Pinto bean, resists root-rot fungi, Apr-23 Pistachios

ARS collection of, Nov-17

device uses impact acoustics to sort, Nov-16 Plant Gene Expression Center, Aug-2 Plowing and carbon loss, Oct-15 Plums, three new, Apr-12 Pollination, identifying genes involved in, Aug-8

Pollination, identifying genes involved in, Aug-8 Pork, see *Pigs* 

Potato

hybrids with late blight resistance, Aug-11 new Ivory Crisp variety good for frying, Sep-23 Poultry (see also *Chickens, Turkeys*) probiotics influence microbes in gut of, Jan-20 vaccine for exotic Newcastle disease, Apr-23 Prebiotics as food/feed additives boost good gut bacteria, Aug-23

Precipitation predictions, usefulness of, Jul-8
Prions, tests to detect in animals, feed, Dec-4
Rangeland health, research on at Jornada
Experimental Range, Jul-2, 4

Rangeland, revegetating with native plants, Nov-20 Raspberries, protective adaptations in, Nov-23 Reforestation

micropropagation technique aids, Dec-17 of Missouri floodplains, Dec-18 Remote sensing of soil moisture, Mar-20 Rice

gene for blast fungus resistance, Aug-18 nitrogen availability affects yields, Sep-9 sequencing genome of, Oct-13

Risk assessment of transgenic organisms, Sep-2, 4 Roots, adventitious, Nov-23

Root washer speeds root studies, Jan-19
Roses, wild, benefit biocontrol wasps, Jan-12
Rubisco activase gene to help cotton in heat, Nov-9
Russian wheat aphid, new biotype, Apr-16

### S-Z

SAGE analysis in turkey reproduction, Sep-12 Salinity

managing in lower Colorado River area, Sep-16 of soils and groundwater in California, Aug-4 Salmonella

bacteriocins reduce numbers of, Nov-23 eggshell quality affected by, Oct-19 tracking movement of in pigs, May-23 Sclerotinia, sunflower germplasms resist, May-13 Scrapie in sheep and goats, Dec-2, 4 Seed source islands revegetate rangelands, Nov-20 Seed, chaffy, machine cleans and sorts, Jan-23 Selenium, kale and turnip absorb excess from waters, Sep-23

Sheep diagnosing scrapie in, Dec-4 grazing and grasshopper outbreaks, Oct-10 leafy-spurge-eating, Sep-23

Silverleaf whitefly, biocontrol of, Mar-23, Jun-23 Snails, mugwort extract vulgarone B as control for, Jan-23

Soil Climate Analysis Network, Mar-20 Soil conductivity, changes in, Sep-14 Soil Moisture Experiment 2003 (SMEX03), Mar-20 Soil

carbon loss from one plowing, Oct-16 compacted, trash pulp helps revegetate, Jul-15 compaction of by tractors, Jan-23 monitoring moisture of to predict weather, Mar-20 mycorrhizal fungi in, May-7 optimal application of phosphorus to, Jul-23

phosphorus in binds to alum-based watertreatment residue, Jul-21 removing excess metals from with alpine

pennycress, Sep-22

salinity of in California, Aug-4
"Salt Sniffer" maps high-saline, Sep-16
sensor measures compaction of, Feb-23
submerged, nitrogen binds strongly to organic
matter in. Sep-9

tillage affect on CO<sub>2</sub> loss from, Mar-13
Soilborne pests, biofumigation of, Oct-14
Sorghum, testing new baking uses for, Jun-22
Soy and drug metabolism, Jan-8
Soy isoflavone supplements and bone health, Apr-21
Soy oil, biodegradable hydraulic fluid from, Oct-22
Soy proteins in infant formula, Jan-8
Soybeans

biocontrol of nematode pest of, Mar-13 hypoallergenic, Sep-4 new germplasm for high yield, diversity, Jul-20 new line yields oil with high oleic acid, Feb-22 soy flour-wheat flour ratio for breadmaking, Aug-23 Streamflow

models for long-range planning of, Jul-8 of Rio Grande, predicting, Jul-4 Sugar beets

genetic tools assist in breeding of, Apr-2, 4 two new lines with smooth roots, Mar-23 Sugar, edible adhesives made from, Aug-23 Sunflowers, three new germplasm lines resist Sclerotinia, May-13

Sunshine bass, improved production of, Jun-14 Super Slurper dries soaked books and paper, Feb-23 TAME Melaleuca project in Everglades, Nov-2, 4 Termites, low-dose naphthalenic bait for, Oct-23 Test

for Brucella melitensis in goat's milk, Oct-23 for ractopamine detection in livestock, Apr-20 PCR test identifies E. coli strains, Jul-23 Ticks, collaboration to control in Scotland, Apr-21 Tillage type, effect of on CO\_loss from soil, Mar-13 Tortillas, delaying staling of, Sep-15 Transgenes, preventing spread of, Sep-4 Transgenic organisms, risk assessment of, Sep-2, 4 Transmissible spongiform encephalopathies, Dec-2, 4

Trees

automated plant culture system for, Dec-17 root production method and, Dec-18 Turkeys

genetic studies of sperm survival, Sep-12 vitamin E lowers *Listeria monocytogenes* in, Aug-23 U.S. National Fungus Collections, Mar-14 Valles Caldera National Preserve, ARS research tested at. Jul-2

Varroa mites, breeding bees with natural resistance trait, May-14

Vitamin D and muscle strength, falls in elderly, Oct-19 Wasp, parasitic, as biocontrol for silverleaf whitefly, Mar-23

Watermelon, low sugar, high lycopene in, Dec-10 Water quality

ARS efforts at Little Topashaw Creek, May-2, 4 curbing phosphorus runoff to water bodies, Jul-21 nitrate in groundwater under pastures, Jun-21 using reclaimed waters for irrigation, Aug-4 Water supply, climate data helps predict, Jul-8 Weeds

biofumigating with mustard plants, Oct-14 control of Russian knapseed, May-23 Wheat flour, gluten and protein tests for, Sep-15 Wheat starch, biodegradable foodservice containers from, Sep-19 Wheat

Hessian fly saliva triggers response in, Apr-23 new PCR test precisely identifies rusts in, Jun-13 with resistance to Russian wheat aphid, Apr-16 Wildlife, agroforestry efforts help preserve, Dec-18 Yeasts, role of in coffee berry borer biology, Nov-10 Yellow starthistle, fungal biocontrol of, Aug-20